

T01

(19) SU (11) 1836876 (13) A3  
 (51) 5 E21C 41/18, E 21B 43/295

Union of Soviet Socialist Republics  
 USSR State Committee for Patents (Gosparent USSR)

**(12) DESCRIPTION OF INVENTION**  
 to patent certificate

- 
- (21) 4897079/03  
 (22) 12.29.90  
 (46) 12.30.94. Bul. No. 24  
 (71) A.A. Skochinsky Mining Institute  
 (72) A.V. Iliusha, D.D. Glazov, N.G. Kartavy, Yu. N. Malyshev, N.L. Razumniak  
 (73) Combined Scientific-Technical Association for Subterranean Electricity Production Procedures and Technology Development.  
 (56) USSR Patent No. 941587, Cl. E 21B 43/295, 1982  
 USA Patent No. 299/2, 1978  
 USSR Patent No. 1560735, Cl. E 21B 43/295, 1990.  
**(54) A METHOD FOR COAL BED PROCESSING AND THE EQUIPMENT FOR ITS IMPLEMENTATION**  
  
 (57) Utilization: This invention deals with the mining industry, and may be utilized with subsurface and with open development of coal deposits. The essence of the invention: the coal beds are processed by columns or through holes by combustion and gasification of coal inside the bed, with the properly purified and electrochemically processed products of gasification being converted into electricity by means of a fuel cell battery; the oxidation product of hydrogen - one of the main components of the fuel mixture (the coal gasification product)- namely water, is converted within the waste-heat boiler into steam by afterburning of residual fuel, remaining after processing in the fuel cell battery; this steam, together with the inert carbon dioxide - produced by oxidation of the carbon monoxide of the fuel mix - is fed into the combustion zone of the coal within the bed, and the regenerated hydrogen and carbon monoxide are aging fed to the fuel cell battery.  
 2 pages, 3 claims, 2 illustrations.